CLAIMS

1. A combination comprising:
   - one or more mRNA molecules encoding all of the functional immunostimulatory proteins CD40L, CD70 and caTLR4; and
   - one or more mRNA molecules encoding one or more antigens or epitopes;

wherein at least one of said mRNA molecules is characterized in having a 5' CAP-1 structure.

2. A combination as defined in claim 1; wherein all of said mRNA molecules have a 5' CAP-1 structure.

3. The combination as defined in any one of claims 1 to 2; wherein said mRNA molecules further comprise at least one modified nucleoside.

4. The combination as defined in claim 3; wherein said at least one modified nucleoside is selected from the list comprising pseudouridine, 5-methoxy-uridine, 5-methyl-cytidine, 2-thio-uridine, and N6-methyladenosine.

5. The combination as defined in any one of claims 3 to 4; wherein said at least one modified nucleoside is a pseudouridine selected from the list comprising: 4-thio-pseudouridine, 2-thio-pseudouridine, 1-carboxymethyl-pseudouridine, 1-propynyl-pseudouridine, 1-taurinomethyl-pseudouridine, N1-methyl-pseudouridine, 4-thio-1-methyl-pseudouridine, 2-thio-1-methyl-pseudouridine, 1-methyl-1-deaza-pseudouridine, 2-thio-1-methyl-1-deaza-pseudouridine, dihydropseudouridine, 2-thio-dihydropseudouridine, 4-methoxy- pseudouridine, and 4-methoxy-2-thio-pseudouridine; in particular N1-methyl-pseudouridine.

6. The combination as defined in claim 5; wherein about 100% of uridines in said mRNA molecules is replaced by N1-methyl-pseudouridine.

7. A pharmaceutical composition comprising the combination as defined in any one of claims 1 to 6 and at least one pharmaceutically acceptable agent.

8. The pharmaceutical composition as defined in claim 7; wherein said combination is formulated in nanoparticles, such as lipid nanoparticles or polymeric nanoparticles.

9. The pharmaceutical composition as defined in any one of claims 7 to 8; wherein said composition is formulated for intravenous, intranodal, intratumoral, subcutaneous, intradermal or intramuscular formulation.

10. The pharmaceutical composition as defined in any one of claims 7-9; wherein said composition is in the form of a vaccine.

11. The combination as defined in any one of claims 1 to 6; or the pharmaceutical composition as defined in any one of claims 7 to 10 for use in human or veterinary medicine.

12. The combination as defined in any one of claims 1 to 6; or the pharmaceutical composition as defined in any one of claims 7 to 10 for use in vaccination.

13. The combination as defined in any one of claims 1 to 6; or the pharmaceutical composition as defined in any one of claims 7 to 10 wherein said antigen is a cancer antigen.

14. The combination or the pharmaceutical composition as defined in claim 13 for use in the treatment of cell proliferative disorders.

15. Use of a combination or a pharmaceutical composition as defined in claim 13, in the manufacture of a medicament for treating a cell proliferative disorder in a subject.